metalloproteinase-13. The invention contemplates inhibitors having amino acid sequences from the linking region of any of the matrix metalloproteinases. For example, peptide inhibitors of the invention can have amino acid sequences drawn from any region from about amino acid 70 to about amino acid 120 of the matrix metalloproteinase-2 sequence (SEQ ID NO:14), and analogous regions of all other matrix metalloproteinases.

Please substitute page 3, the paragraph beginning on line 9 and continuing on page 4 for the paragraph in the appendix entitled "Clean Version of Page 3, the Paragraph beginning on line 9." Specific amendments to page 3, the paragraph beginning on line 9 are detailed in the following marked-up paragraph:

The invention provides peptides of any one of formulae (I), (II), (III):

Xaa_1-Xaa_2-Xaa_3-Xaa_4-Xaa_5-Xaa_6 Xaa_7-Xaa_8-Xaa_9 (I)

Xaa_{10}-Xaa_{11}-Xaa_{12} Xaa_{13}-Xaa_{14}-Xaa_{15}-Xaa_{16}-Xaa_{17}-Xaa_{18}-Xaa_{19} (II)

Xaa_1-Xaa_2-Xaa_3-Xaa_4-Xaa_5-Xaa_6-Xaa_7-Xaa_8-Xaa_9-Xaa_{10}-Xaa_{11}-
Xaa_{12}-Xaa_{13}-Xaa_{14}-Xaa_{15}-Xaa_{16}-Xaa_{17}-Xaa_{18}-Xaa_{19} (III)

wherein

Xaa_1, Xaa_4, and Xaa_6 are separately each apolar amino acids;
Xaa_2 is a basic amino acid;
Xaa_3 is a cysteine-like amino acid;
Xaa_5 is a polar or aliphatic amino acid;
Xaa_7 is an acidic amino acid,
Xaa_8 is an aliphatic or polar amino acid;
Xaa_9 is an aliphatic, apolar or basic amino acid; and
Xaa_{10} is a polar, acidic, basic or apolar amino acid;
Xaa_{11} is a polar or aromatic amino acid;
Xaa_{12} is a polar, basic, aliphatic or apolar amino acid ;
Xaa_{13} is an aromatic, aliphatic, polar or acidic amino acid;
Xaa_{14} is an aromatic, apolar or polar amino acid;
Xaa_{15} is an apolar or acidic amino acid;
Xaa_{16} is a basic, a polar or an apolar amino acid;
Xaa_{17} is a basic, a polar, an aliphatic, an apolar or an acidic amino acid;
Xaa_{18} is an apolar or an aliphatic amino acid;
Xaa_{19} is a basic or an aliphatic amino acid; and
wherein the peptide is capable of inhibiting the activity of matrix [metalloproteinse] metalloproteinase-1, matrix [metalloproteinse] metalloproteinase-2, matrix [metalloproteinse] metalloproteinase-3, matrix [metalloproteinse-4, matrix metalloproteinse] metalloproteinase-4, matrix [metalloproteinse] metalloproteinase-5, matrix [metalloproteinse] metalloproteinase-6, matrix [metalloproteinse]

metalloproteinase-7, matrix [metalloproteinse] metalloproteinase-8, or matrix [metalloproteinse] metalloproteinase-9, matrix [metalloproteinse] metalloproteinase-10, matrix [metalloproteinse] metalloproteinase-11, matrix [metalloproteinse] metalloproteinase-12, and matrix [metalloproteinse] metalloproteinase-13. In a preferred embodiment, the peptide can inhibit the activity of matrix [metalloproteinse] metalloproteinase-2, matrix [metalloproteinse] metalloproteinase-3, matrix [metalloproteinse] metalloproteinase-7, matrix [metalloproteinse] metalloproteinase-8, or matrix [metalloproteinse] metalloproteinase-9.

Please substitute page 5, the paragraph beginning on line 1 and continuing on page 6 for the paragraph in the appendix entitled "Clean Version of Page 5, the Paragraph beginning on line 1." Specific amendments to page 5, the paragraph beginning on line 1 are detailed in the following marked-up paragraph:

The invention also provides peptides of formula (IV) (SEQ ID NO:18):

$$Xaa_a\text{-}Xaa_b\text{-}Xaa_c\text{-}Xaa_d\text{-}Xaa_e\text{-}Xaa_f\text{-}Xaa_g\text{-}Xaa_h\text{-}Xaa_i\text{-}Xaa_j\text{-}Xaa_k\text{-}Xaa_L\text{-}Xaa_m\text{-}Xaa_1\text{-}Xaa_2\text{-}Xaa_3\text{-}Xaa_4\text{-}Xaa_5\text{-}Xaa_6\text{-}Xaa_7\text{-}Xaa_8\text{-}Xaa_9\text{-}Xaa_{10}\text{-}Xaa_{11}\text{-}Xaa_{12}\text{-}Xaa_{13}\text{-}Xaa_{14}\text{-}Xaa_{15}\text{-}Xaa_{16}\text{-}Xaa_{17}\text{-}Xaa_{18}\text{-}Xaa_{19} \quad \text{(IV)}$$

wherein:

Xaa_a is proline;
Xaa_b is glutamine or glutamic acid;
Xaa_c is threonine;
Xaa_d is glycine;
Xaa_e is aspartic acid or glutamic acid;
Xaa_f is leucine;
Xaa_g is aspartic acid;
Xaa_h is glutamine or serine;
Xaa_i is asparagine or alanine;
Xaa_j is threonine;
Xaa_k is isoleucine or leucine;
Xaa_L is glutamic acid or lysine;
Xaa_m is threonine or alanine;

Xaa_n is methionine;
Xaa_o is arginine;
Xaa_p is lysine or threonine;
Xaa_{17} is lysine or aspartic acid;
Xaa_{19} is lysine; and

Xaa_1 is proline;
Xaa_2 is arginine;
Xaa_3 is cysteine;
Xaa_4 is glycine;
Xaa_5 is valine or asparagine;
Xaa_6 is proline;
Xaa_7 is aspartic acid;
Xaa_8 is valine or leucine;
Xaa_9 is alanine or glycine;
Xaa_{10} is asparagine or arginine;
Xaa_{11} is tyrosine or phenylalanine;
Xaa_{12} is asparagine or glutamine;
Xaa_{13} is phenylalanine or threonine;
Xaa_{14} is phenylalanine;
Xaa_{15} is proline or glutamic acid;
Xaa_{16} is arginine or glycine;
Xaa_{18} is proline or leucine;

wherein the peptide is capable of inhibiting the activity of a metalloproteinase. For

example, the metalloproteinase can be matrix [metalloproteinse] metalloproteinase-1, matrix [metalloproteinse] metalloproteinase-2, matrix [metalloproteinse] metalloproteinase-3, matrix [metalloproteinse-4, matrix metalloproteinse] metalloproteinase-4, matrix [metalloproteinse] metalloproteinase-5, matrix [metalloproteinse] metalloproteinase-6, matrix [metalloproteinse] metalloproteinase-7, matrix [metalloproteinse] metalloproteinase-8, and matrix [metalloproteinse] metalloproteinase-9, matrix [metalloproteinse] metalloproteinase-10, matrix [metalloproteinse] metalloproteinase-11, matrix [metalloproteinse] metalloproteinase-12, or matrix [metalloproteinse] metalloproteinase-13. Desirable peptides inhibit matrix metalloproteinase-2 or matrix metalloproteinase-9.

Please substitute page 6, the paragraph beginning on line 29 and continuing on pages 7 and 8 for the paragraph in the appendix entitled "Clean Version of Page 6, the Paragraph beginning on line 29." Specific amendments to page 6, the paragraph beginning on line 29 are detailed in the following marked-up paragraph:

The invention further provides a method for treating a wound that comprises administering a therapeutically effective amount of a peptide of formula I, II, III or IV :

Xaa_1-Xaa_2-Xaa_3-Xaa_4-Xaa_5-Xaa_6 Xaa_7-Xaa_8-Xaa_9 (I)

Xaa_{10}-Xaa_{11}-Xaa_{12} Xaa_{13}-Xaa_{14}-Xaa_{15}-Xaa_{16}-Xaa_{17}-Xaa_{18}-Xaa_{19} (II)

Xaa_1-Xaa_2-Xaa_3-Xaa_4-Xaa_5-Xaa_6-Xaa_7-Xaa_8-Xaa_9-Xaa_{10}-Xaa_{11}-
Xaa_{12}-Xaa_{13}-Xaa_{14}-Xaa_{15}-Xaa_{16}-Xaa_{17}-Xaa_{18}-Xaa_{19} (III)

Xaa_a-Xaa_b-Xaa_c-Xaa_d-Xaa_e-Xaa_f-Xaa_g-Xaa_h-Xaa_i-Xaa_j-Xaa_k-Xaa_L-Xaa_m-
Xaa_1-Xaa_2-Xaa_3-Xaa_4-Xaa_5-Xaa_6-Xaa_7-Xaa_8-Xaa_9-Xaa_{10}-Xaa_{11}-
Xaa_{12}-Xaa_{13}-Xaa_{14}-Xaa_{15}-Xaa_{16}-Xaa_{17}-Xaa_{18}-Xaa_{19} (IV)
(SEQ ID NO:20)

wherein:

Xaa_1, Xaa_4, and Xaa_6 are separately each apolar amino acids;
Xaa_2 is a basic amino acid;
Xaa_3 is a cysteine-like amino acid;
Xaa_5 is a polar or aliphatic amino acid;
Xaa_7 is an acidic amino acid,
Xaa_8 is an aliphatic or polar amino acid;
Xaa_9 is an aliphatic, apolar or basic amino acid; and
Xaa_{10} is a polar, acidic, basic or apolar amino acid;
Xaa_{11} is a polar or aromatic amino acid;
Xaa_{12} is a polar, basic, aliphatic or apolar amino acid ;
Xaa_{13} is an aromatic, aliphatic, polar or acidic amino acid;
Xaa_{14} is an aromatic, apolar or polar amino acid;

Xaa_{15} is an apolar or acidic amino acid;
Xaa_{16} is a basic, a polar or an apolar amino acid;
Xaa_{17} is a basic, a polar, an aliphatic, an apolar or an acidic amino acid;
Xaa_{18} is an apolar or an aliphatic amino acid;
Xaa_{19} is a basic or an aliphatic amino acid;
Xaa_a is proline;
Xaa_b is glutamine or glutamic acid;
Xaa_c is threonine;
Xaa_d is glycine;
Xaa_e is aspartic acid or glutamic acid;
Xaa_f is leucine;
Xaa_g is aspartic acid;
Xaa_h is glutamine or serine;
Xaa_i is asparagine or alanine;
Xaa_j is threonine;
Xaa_k is isoleucine or leucine;
Xaa_L is glutamic acid or lysine;
Xaa_m is threonine or alanine;
Xaa_n is methionine;
Xaa_o is arginine; and
Xaa_p is lysine or threonine;
wherein the peptide is capable of inhibiting the activity of a matrix metalloproteinase.

Please substitute page 9, paragraph 2 for the paragraph in the appendix entitled "Clean Version of Page 9, Paragraph 2." Specific amendments to page 9, paragraph 2 are detailed in the following marked-up paragraph:

Figure 1 provides a CLUSTAL X (version 1.8) multiple sequence (SEQ ID NOS:2-10) alignment of the cleavage spanning regions of select MMP proenzymes. Figure 1A provides an alignment that highlights conserved residues where an '*' indicates complete identity among the sequences, a ':' indicates 7/9 conserved positions, and a '.' indicates greater than 80% identical positions with mostly conserved substitutions. Figure 1B indicates the positions of heterogeneity in bold.

Please substitute page 25, the paragraph beginning on line 9 and continuing on page 26 for the paragraph in the appendix entitled "Clean Version of Page 25, the Paragraph beginning on line 9." Specific amendments to page 25, the paragraph beginning on line 9 are detailed in the following marked-up paragraph:

In a preferred embodiment (SEQ ID NO:19):
Xaa_1 is proline,

Xaa_2 is arginine,
Xaa_3 is cysteine,
Xaa_4 is glycine,
Xaa_5 is valine or asparagine,
Xaa_6 is proline,
Xaa_7 is aspartic acid,
Xaa_8 is valine, leucine, or serine,
Xaa_9 is alanine, glycine or histidine,
Xaa_{10} is asparagine, aspartic acid, histidine, arginine, glutamine or glycine,
Xaa_{11} is tyrosine or phenylalanine,
Xaa_{12} is asparagine, serine, arginine, glutamine, valine or methionine,
Xaa_{13} is phenylalanine, valine, leucine, threonine, serine, or glutamic acid,
Xaa_{14} is phenylalanine, methionine or threonine,
Xaa_{15} is proline or glutamic acid,
Xaa_{16} is arginine, asparagine or glycine,
Xaa_{17} is lysine, threonine, serine, isoleucine, methionine, glycine, aspartic acid or asparagine,
Xaa_{18} is proline or leucine, and
Xaa_{19} is lysine, valine or arginine.

Please substitute page 27, the paragraph beginning on line 13 and continuing on page 28 for the paragraph in the appendix entitled "Clean Version of Page 27, the Paragraph beginning on line13." Specific amendments to page 27, the paragraph beginning on line 13 are detailed in the following marked-up paragraph:

In one embodiment, it is desirable to inhibit MMPs-2 and 9, but to keep the level of MMP-1 relatively unregulated in order to heal chronic wounds. Based on the sequence alignment above one of skill in the art can design a peptide with amino acids that are found in MMP2 and MMP9 proenzyme sequences but not in the MMP1 proenzyme sequence, to produce a peptide that will inhibit MMPs-2 and 9, while leaving MMP-1 uninhibited. Such a peptide is provided by formula IV.

$$Xaa_a\text{-}Xaa_b\text{-}Xaa_c\text{-}Xaa_d\text{-}Xaa_e\text{-}Xaa_f\text{-}Xaa_g\text{-}Xaa_h\text{-}Xaa_i\text{-}Xaa_j\text{-}Xaa_k\text{-}Xaa_L\text{-}Xaa_m\text{-}Xaa_1\text{-}Xaa_2\text{-}Xaa_3\text{-}Xaa_4\text{-}Xaa_5\text{-}Xaa_6\text{-}Xaa_7\text{-}Xaa_8\text{-}Xaa_9\text{-}Xaa_{10}\text{-}Xaa_{11}\text{-}Xaa_{12}\text{-}Xaa_{13}\text{-}Xaa_{14}\text{-}Xaa_{15}\text{-}Xaa_{16}\text{-}Xaa_{17}\text{-}Xaa_{18}\text{-}Xaa_{19} \quad \text{(IV)}$$

(SEQ ID NO:18)

wherein:

Xaa_a is proline;
Xaa_b is glutamine or glutamic acid;
Xaa_c is threonine;
Xaa_1 is proline;
Xaa_2 is arginine;
Xaa_3 is cysteine;

Xaa_d is glycine;
Xaa_e is aspartic acid or glutamic acid;
Xaa_f is leucine;
Xaa_g is aspartic acid;
Xaa_h is glutamine or serine;
Xaa_i is asparagine or alanine;
Xaa_j is threonine;
Xaa_k is isoleucine or leucine, preferably isoleucine;
Xaa_L is glutamic acid or lysine, preferably glutamic acid;
Xaa_m is threonine or alanine;
Xaa_n is methionine;
Xaa_o is arginine;
Xaa_p is lysine or threonine;
Xaa_{17} is lysine or aspartic acid;
Xaa_{19} is lysine.

Xaa_4 is glycine;
Xaa_5 is valine or asparagine, preferably asparagine;
Xaa_6 is proline;
Xaa_7 is aspartic acid;
Xaa_8 is valine or leucine, preferably leucine;
Xaa_9 is alanine or glycine, preferably glycine;
Xaa_{10} is asparagine or arginine;
Xaa_{11} is tyrosine or phenylalanine, preferably tyrosine;
Xaa_{12} is asparagine or glutamine;
Xaa_{13} is phenylalanine or threonine;
Xaa_{14} is phenylalanine;
Xaa_{15} is proline or glutamic acid, preferably proline;
Xaa_{16} is arginine or glycine, preferably arginine;
Xaa_{18} is proline or leucine, preferably leucine; and

In the Claims

Please substitute the claim set in the appendix entitled "Clean Version of Pending Claims" for the previously pending claim set. Claim 28 is added and claims 5, 13, 15, 19 and 20-26 are amended. Specific amendments to individual claims are detailed in the following marked up set of claims.

Please add the following new claim:

28. (New) A composition that comprises a therapeutically effective amount of peptide of formula IV and a pharmaceutically acceptable carrier:

$$Xaa_a\text{-}Xaa_b\text{-}Xaa_c\text{-}Xaa_d\text{-}Xaa_e\text{-}Xaa_f\text{-}Xaa_g\text{-}Xaa_h\text{-}Xaa_i\text{-}Xaa_j\text{-}Xaa_k\text{-}Xaa_L\text{-}Xaa_m\text{-}$$
$$Xaa_1\text{-}Xaa_2\text{-}Xaa_3\text{-}Xaa_4\text{-}Xaa_5\text{-}Xaa_6\text{-}Xaa_7\text{-}Xaa_8\text{-}Xaa_9\text{-}Xaa_{10}\text{-}Xaa_{11}\text{-}$$
$$Xaa_{12}\text{-}Xaa_{13}\text{-}Xaa_{14}\text{-}Xaa_{15}\text{-}Xaa_{16}\text{-}Xaa_{17}\text{-}Xaa_{18}\text{-}Xaa_{19} \quad \text{(IV)}$$

(SEQ ID NO:20)

wherein:

Xaa_1, Xaa_4, and Xaa_6 are separately each apolar amino acids;

Xaa_2 is a basic amino acid;

Xaa_3 is a cysteine-like amino acid;

Xaa_5 is a polar or aliphatic amino acid;

Xaa_7 is an acidic amino acid,

Xaa_8 is an aliphatic or polar amino acid;

Xaa_9 is an aliphatic, apolar or basic amino acid; and

Xaa_{10} is a polar, acidic, basic or apolar amino acid;

Xaa_{11} is a polar or aromatic amino acid;

Xaa_{12} is a polar, basic, aliphatic or apolar amino acid ;

Xaa_{13} is an aromatic, aliphatic, polar or acidic amino acid;

Xaa_{14} is an aromatic, apolar or polar amino acid;

Xaa_{15} is an apolar or acidic amino acid;

Xaa_{16} is a basic, a polar or an apolar amino acid;

Xaa_{17} is a basic, a polar, an aliphatic, an apolar or an acidic amino acid;

Xaa_{18} is an apolar or an aliphatic amino acid;

Xaa_{19} is a basic or an aliphatic amino acid;

Xaa_a is proline;

Xaa_b is glutamine or glutamic acid;

Xaa_c is threonine;

Xaa_d is glycine;

Xaa_e is aspartic acid or glutamic acid;

Xaa_f is leucine;

Xaa_g is aspartic acid;

Xaa_h is glutamine or serine;

Xaa_i is asparagine or alanine;

Xaa_j is threonine;

Xaa_k is isoleucine or leucine;

Xaa_L is glutamic acid or lysine;

Xaa_m is threonine or alanine;

Xaa_n is methionine;

Xaa_o is arginine;

Xaa_p is lysine or threonine; and

wherein the peptide is capable of inhibiting the activity of a matrix metalloproteinase.

Please amend the following claims:

5. (Amended) A composition that comprises a therapeutically effective amount of peptide of formula IV and a pharmaceutically acceptable carrier:

$$Xaa_a\text{-}Xaa_b\text{-}Xaa_c\text{-}Xaa_d\text{-}Xaa_e\text{-}Xaa_f\text{-}Xaa_g\text{-}Xaa_h\text{-}Xaa_i\text{-}Xaa_j\text{-}Xaa_k\text{-}Xaa_L\text{-}Xaa_m\text{-}$$
$$Xaa_1\text{-}Xaa_2\text{-}Xaa_3\text{-}Xaa_4\text{-}Xaa_5\text{-}Xaa_6\text{-}Xaa_7\text{-}Xaa_8\text{-}Xaa_9\text{-}Xaa_{10}\text{-}Xaa_{11}\text{-}$$
$$Xaa_{12}\text{-}Xaa_{13}\text{-}Xaa_{14}\text{-}Xaa_{15}\text{-}Xaa_{16}\text{-}Xaa_{17}\text{-}Xaa_{18}\text{-}Xaa_{19} \quad \text{(IV)}$$

(SEQ ID NO:18)

wherein:

Xaa_a is proline;

Xaa_b is glutamine or glutamic acid;

Xaa_c is threonine;

Xaa_d is glycine;

Xaa_e is aspartic acid or glutamic acid;

Xaa_f is leucine;

Xaa_g is aspartic acid;

Xaa_h is glutamine or serine;

Xaa_i is asparagine or alanine;

Xaa_j is threonine;

Xaa_k is isoleucine or leucine;

Xaa_L is glutamic acid or lysine;

Xaa_m is threonine or alanine;

Xaa_1 is proline;

Xaa_2 is arginine;

Xaa_3 is cysteine;

Xaa_4 is glycine;

Xaa_5 is valine or asparagine;

Xaa_6 is proline;

Xaa_7 is aspartic acid;

Xaa_8 is valine or leucine;

Xaa_9 is alanine or glycine;

Xaa_{10} is asparagine or arginine;

Xaa_{11} is tyrosine or phenylalanine;

Xaa_{12} is asparagine or glutamine;

Xaa_{13} is phenylalanine or threonine;

Xaa_n is methionine;

Xaa_o is arginine;

Xaa_p is lysine or threonine;

Xaa_{14} is phenylalanine;

Xaa_{15} is proline or glutamic acid;

Xaa_{16} is arginine or glycine;

Xaa_{17} is lysine or aspartic acid;

Xaa_{18} is proline or leucine;

Xaa_{19} is lysine; and

wherein the peptide is capable of inhibiting the activity of a matrix metalloproteinase.

13. (Amended) The composition of any one of claims 2-5 wherein the matrix metalloproteinase is any one of matrix [metalloproteinse] metalloproteinase-1, matrix [metalloproteinse] metalloproteinase-2, matrix [metalloproteinse] metalloproteinase-3, matrix [metalloproteinse-4, matrix metalloproteinse] metalloproteinase-4, matrix [metalloproteinse] metalloproteinase-5, matrix [metalloproteinse] metalloproteinase-6, matrix [metalloproteinse] metalloproteinase-7, matrix [metalloproteinse] metalloproteinase-8, and matrix [metalloproteinse] metalloproteinase-9, matrix [metalloproteinse] metalloproteinase-10, matrix [metalloproteinse] metalloproteinase-11, matrix [metalloproteinse] metalloproteinase-12, or matrix [metalloproteinse] metalloproteinase-13.

15. (Amended) The composition of claim 14 wherein the peptide can inhibit proteinase activity of any one of matrix [metalloproteinse] metalloproteinase-1, matrix [metalloproteinse] metalloproteinase-2, matrix [metalloproteinse] metalloproteinase-3, matrix [metalloproteinse-4, matrix metalloproteinse] metalloproteinase-4, matrix [metalloproteinse] metalloproteinase-5, matrix [metalloproteinse] metalloproteinase-6, matrix [metalloproteinse] metalloproteinase-7, matrix [metalloproteinse] metalloproteinase-8, and matrix [metalloproteinse] metalloproteinase-9, matrix [metalloproteinse] metalloproteinase-10, matrix [metalloproteinse] metalloproteinase-11, matrix [metalloproteinse] metalloproteinase-12, or matrix [metalloproteinse] metalloproteinase-13.

19. (Amended) A wound dressing that comprises a peptide of formula IV:

$$Xaa_a\text{-}Xaa_b\text{-}Xaa_c\text{-}Xaa_d\text{-}Xaa_e\text{-}Xaa_f\text{-}Xaa_g\text{-}Xaa_h\text{-}Xaa_i\text{-}Xaa_j\text{-}Xaa_k\text{-}Xaa_L\text{-}Xaa_m\text{-}$$
$$Xaa_1\text{-}Xaa_2\text{-}Xaa_3\text{-}Xaa_4\text{-}Xaa_5\text{-}Xaa_6\text{-}Xaa_7\text{-}Xaa_8\text{-}Xaa_9\text{-}Xaa_{10}\text{-}Xaa_{11}\text{-}$$
$$Xaa_{12}\text{-}Xaa_{13}\text{-}Xaa_{14}\text{-}Xaa_{15}\text{-}Xaa_{16}\text{-}Xaa_{17}\text{-}Xaa_{18}\text{-}Xaa_{19} \quad \text{(IV)}$$

(SEQ ID NO:18)

wherein:

Xaa_a is proline;
Xaa_b is glutamine or glutamic acid;
Xaa_c is threonine;
Xaa_d is glycine;
Xaa_e is aspartic acid or glutamic acid;
Xaa_f is leucine;
Xaa_g is aspartic acid;
Xaa_h is glutamine or serine;
Xaa_i is asparagine or alanine;
Xaa_j is threonine;
Xaa_k is isoleucine or leucine;
Xaa_L is glutamic acid or lysine;
Xaa_m is threonine or alanine;
Xaa_n is methionine;
Xaa_o is arginine;
Xaa_p is lysine or threonine;
Xaa_1 is proline;
Xaa_2 is arginine;
Xaa_3 is cysteine;
Xaa_4 is glycine;
Xaa_5 is valine or asparagine;
Xaa_6 is proline;
Xaa_7 is aspartic acid;
Xaa_8 is valine or leucine;
Xaa_9 is alanine or glycine;
Xaa_{10} is asparagine or arginine;
Xaa_{11} is tyrosine or phenylalanine;
Xaa_{12} is asparagine or glutamine;
Xaa_{13} is phenylalanine or threonine;
Xaa_{14} is phenylalanine;
Xaa_{15} is proline or glutamic acid;
Xaa_{16} is arginine or glycine;
Xaa_{17} is lysine or aspartic acid;
Xaa_{18} is proline or leucine;
Xaa_{19} is lysine; and

wherein the peptide is capable of inhibiting the activity of a matrix metalloproteinase.

20. (Amended) The wound dressing of any one of claims 16-19 or 28, wherein an apolar amino acid is methionine, glycine or proline.

21. (Amended) The wound dressing of any one of claims 16-19 or 28, wherein a basic amino

acid is histidine, lysine, arginine, 2,3-diaminopropionic acid, ornithine, homoarginine, ρ-aminophenylalanine, and 2,4-diaminobutyric acid.

22. (Amended) The wound dressing of any one of claims 16-19 or 28, wherein a cysteine-like amino acid is cysteine, homocysteine, penicillamine, or β-methyl cysteine.

23. (Amended) The wound dressing of any one of claims 16-19 or 28, wherein an aliphatic amino acid is alanine, valine, leucine, isoleucine, t-butylalanine, t-butylalanine, N–methylisoleucine, norleucine, N-methylvaline, cyclohexylalanine, β-alanine, N-methylglycine, or α-aminoisobutyric acid.

24. (Amended) The wound dressing of any one of claims 16-19 or 28, wherein an acidic amino acid is aspartic acid or glutamic acid.

25. (Amended) The wound dressing of any one of claims 16-19 or 28, wherein a polar amino acid is asparagine, glutamine, serine, threonine, tyrosine, citrulline, N-acetyl lysine, methionine sulfoxide, or homoserine, or an apolar amino acid such as methionine, glycine or proline.

26. (Amended) The wound dressing of any one of claims 16-19 or 28, wherein an aromatic amino acid is phenylalanine, tyrosine, tryptophan, phenylglycine, naphthylalanine, β-2-thienylalanine, 1,2,3,4-tetrahydro-isoquinoline-3-carboxylic acid, 4-chlorophenylalanine, 2-fluorophenylalanine, 3-fluorophenylalanine, 4-fluorophenylalanine, pyridylalanine, or 3-benzothienyl alanine.

Remarks

Claims 5, 13, 15, and 19 are amended. Claim 28 is added. Claims 1-28 are pending.

New claim 28 and the amendments to claims 20-26 are supported at page 7, line 9 through page 8, line18 of the specification.

New claim 28 and the amendments to claims 20-26 are supported at page 7, line 9 through page 8, line18 of the specification.

This Preliminary Amendment and the above-referenced SEQUENCE LISTING are filed to conform the above-referenced application to the requirements of 37 C.F.R. §§ 1.821 - 1.825. In accordance with 37 C.F.R. § 1.821(e), a copy of the above-submitted SEQUENCE LISTING in ASCII computer readable form is also submitted on even date herewith to U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington VA 22202. The contents of the paper version of the SEQUENCE LISTING and the computer readable form being submitted to Box Sequence on even date herewith are the same and do not include new matter.

Respectfully submitted,

STEPHEN QUIRK

By his Representatives,

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Date Apr. 19, 2002 By Robin A. Chadwick

Robin A. Chadwick
Reg. No. 36,477

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Box Missing Parts, Commissioner of Patents, Washington, D.C. 20231, on this 19th day of April, 2002.

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